Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-3 (Cancelled).

4. (Curently amended) A $\Sigma\Delta$ modulator with a filter system having reduced switch thermal noise comprising:

an input circuit for receiving an input signal and a quantized feedback signal non-sampled by a switch capacitor circuit and providing a signal representative of the difference;

a filter circuit including at least an input sampling capacitor and switch which introduces thermal noise error;

a quantizer circuit for quantizing the output of said filter circuit;

a feedback circuit, responsive to said quantizer circuit, for delivering to said input circuit said quantized feedback signal; and

said input circuit including means for amplifying said difference signal, before it is submitted to said filter circuit to reduce the input-referred thermal noise by a factor of approximately the gain of the amplification.

5. (Original) The $\Sigma\Delta$ modulator with a filter system having reduced switch thermal noise of claim 4 in which said gain is greater than one.

6. (Original) The ΣΔ modulator with a filter system having reduced switch thermal noise of claim 4 in which said input circuit includes a summing circuit for receiving an input signal and a feedback signal and providing a signal representative of the difference and an amplifier circuit for amplifying said difference signal, before it is submitted to said filter circuit to reduce the input-referred thermal noise by a factor of approximately the gain.

7. (Cancelled)

8. (Cancelled)

9. (Currently amended) A ΣΔ modulator with a filter system having reduced switch thermal noise comprising:

a summing circuit for receiving an input signal and a quantized feedback signal non-sampled by a switch capacitor circuit and providing a signal representative of the difference;

a filter circuit including at least an input sampling capacitor and switch which introduces thermal noise error;

a quantizer circuit for quantizing the output of said filter circuit;

a feedback circuit, responsive to said quantizer circuit, for delivering to said summing circuit said quantized feedback signal; and

an amplifier circuit for amplifying said difference signal, before it is

submitted to said filter circuit to reduce the input-referred thermal noise by a factor of approximately the gain of said amplifier circuit.

10. (Original) A $\Sigma\Delta$ modulator with a filter system having reduced switch thermal noise of claim 9 in which said amplifier circuit has a gain greater than one.